

CLAIMS

1. A system for enabling an issuing authority to distribute benefits to a plurality
2 of patrons, the system comprising:
 at least one smart card associated with each patron of the plurality of
4 patrons, the at least one smart card having a serial number and means for
storing information;
 a central computer controlled by the issuing authority and having
6 applications for processing benefits information, the benefits information
8 including a benefits monetary value associated with each said patron;
 a benefits storage device connected to the central computer for storing
10 the benefits information,
 an entry means for inputting or updating the benefits information to the
12 benefits storage device; and
 an express vending machine having a bidirectional electronic connection
14 to the central computer for accepting a transfer of at least a portion of the
benefits monetary value to the at least one smart card, the express vending
16 machine having a user interface for each said patron to request the benefits and
a read/write mechanism for reading the at least one smart card and writing the
18 benefits monetary value to the at least one smart card.
2. The system for distributing benefits as in claim 1, wherein the entry means
2 for inputting benefits information is a terminal connected to the central computer
by means of an intranet connection.
3. The system for distributing benefits as in claim 2, further comprising a smart
2 card read/write device connected to the terminal for writing the at least a portion
of the benefits monetary value to the at least one smart card.
4. The system for distributing benefits as in claim 1, further comprising:
2 a web server connected to the central computer; and
a remote terminal connected to the web server by means of an internet
4 connection, the remote terminal for inputting benefits information.

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- 2 5. The system for distributing benefits as in claim 4, further comprising a smart card read/write device connected to the terminal for writing the at least a portion of the benefits monetary value to the at least one smart card.
- 2 6. The system for distributing benefits as in claim 1, wherein the issuing authority is a transit system authority.
- 2 7. The system for distributing benefits as in claim 6, wherein the at least one smart card is used for purchasing transit fares and parking fees from the transit authority.
- 2 8. The system for distributing benefits as in claim 1, wherein the issuing authority is a welfare agency.
- 2 9. The system for distributing benefits as in claim 8, wherein the benefits are for food expenses, and wherein the at least one smart card is used for purchasing food.
- 2 10. The system for distributing benefits as in claim 1, wherein the express vending machine further comprises a station monitor and display system for connecting the express vending machine to the central computer, the station monitor and display system for collecting transaction and maintenance data from the express vending machine.
- 2 11. The system for distributing benefits as in claim 10, wherein the station monitor and display system forward the transaction and maintenance data to the central computer for consolidation and preparation of a plurality of management reports.
- 2 12. The system for distributing benefits as in claim 1, wherein the express vending machine has an add value function for each said patron to add value to the at least one smart card separate and in addition to the benefits monetary value.
- 2 13. The system for distributing benefits as in claim 1, wherein a customer of a plurality of customers is responsible for offering the benefits to a set of patrons

4 of the plurality of patrons, and wherein the customer is liable to the issuing
authority for the benefits monetary value distributed to the set of patrons.

2 14. The system for distributing benefits as in claim 13, wherein the customer is
a private employer.

2 15. The system for distributing benefits as in claim 12, wherein the customer is
a public employer.

2 16. A method for distributing benefits to a patron of a plurality of patrons, the
method comprising the steps of:

4 maintaining a benefits data base in a central computer, the benefits data
base including benefits information for the plurality of patrons, the benefits
information including a patron identifier and a monetary benefit value for the
6 patron;

8 downloading at least a portion of the monetary benefit value to a smart
card upon a request from the patron at a vending machine.

2 17. The method of distributing benefits as in claim 16, wherein step of
maintaining a benefits data base includes entering benefits data into the benefits
data base utilizing a remote terminal.

2 18. The method of distributing benefits as in claim 17, wherein the remote
terminal is connected to the main computer by means of an Internet connection.

2 19. The method of distributing benefits as in claim 16, wherein the step of
downloading further includes the steps of:

4 requesting a claim at the vending machine;
4 sending a request message to the central computer;
6 sending a response message from the central computer to the vending
machine, the response message containing an authorized value;
6 writing the authorized value to the smart card;
8 sending a confirmation message to the central computer that the
authorized value was written to the smart card.

20. The method of distributing benefits as in claim 19, wherein the request
2 message includes a serial number from the smart card, a sequence number, and
a requested value, and wherein the confirmation message is not received by the
4 central computer, further comprising the step of:
verifying the sequence number against a stored sequence number to
6 determine whether the card has received the requested value in a prior
transaction.